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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/318,684	05/25/1999	ERIC C. HANNAH	INTL-0202-US	1769

7590 07/22/2005

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EXAMINER

STULBERGER, CAS P

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/318,684

Applicant(s)

HANNAH ET AL.

Examiner

Cas Stulberger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,9,11,13-21 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,9,11,13-21 and 29-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: application, filed 05/25/1999; amendment filed 03/03/2005.
2. Claims 1-6, 8-9, 11, 13-21, 29-35 are pending in the case. Claims 1, 11, and 29 are independent claims.

Response to Amendment

3. Applicant's argument that Farwell does not disclose transmitting processed video in a digital format from the first housing to the second housing is persuasive.
4. Applicant's arguments, see Amendment, filed 03/03/2005, with respect to the rejection(s) of claim(s) 1-3 and 5-9 under 35 U.S.C 102 (b) over U.S Patent No 5,650,831 to Farwell have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No 5,699,426 to Tsukamoto.
5. Applicant's arguments with respect to claims 1-6, 8-9, 11, 13-21, and 29-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent No. 5,699,426 to Tsukamoto et al.

8. In regards to claim 1, Tsukamoto discloses a receiver (Tsukamoto: Figure 5, #25) and a display (Figure 9). This meets the limitation of a “first and second housing; a receiver to receive a digital television signal in said first housing; a digital television display in said second housing.” The receiver receives a broadcast video signal and supplies the broadcast signal to a decryption display device connected to the data bus (Tsukamoto: Figure 5, #24; column 13, lines 53-66). The bus meets the limitation of “a digital graphics bus coupled to said receiver in said first housing and said display in said second housing to transmit processed video data in a digital format from said first housing to said second housing.” Tsukamoto also discloses a video data bus system which conveys digital video data signals (Tsukamoto: column 1, lines 21-22). This meets the limitation of “to transmit processed video data in a digital format from said first housing to said second housing.

9. In regards to claim 2-3, 5, and 8-9, it is inherent feature of receivers to include a motherboard with a processor, and to receive two different types of serial bus interfaces. Receivers also can receive replaceable cards, such as a motherboard with a controller, and the cards are coupled by a bus.

10. In regards to claim 4, the encrypted video signal is transmitted from the encipherer, propagates through the switch and I/O port to the data bus. The encrypted video signal is retrieved from the data bus and decrypted according to the received encryption key with only

can be decrypted by a device with the correct encryption key (Tsukamoto: column 14, lines 33-43).

11. In regards to claim 6, Tsukamoto discloses a tuner card (Tsukamoto: Figure 1, #30).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 11, 13- 21, 24-27, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,699,426 to Tsukamoto et al as applied to claims 1-6, and 8-9 above, in view of U.S. Patent No. 5,916,736 to Ryan.

14. In regards to claim 11, Tsukamoto discloses encrypting the digital signals at the receiver and decrypting them when they are received at the digital television, connected to the bus, if it has the correct decryption key (Tsukamoto: column 14, lines 33-43). Tsukamoto however does not disclose "two different levels of encryption."

15. Ryan discloses two different levels of encryption (Ryan: column 7, lines 15-20)

16. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encryption and decryption across a bus as disclosed by Tsukamoto with the method of two different levels of encryption as disclosed by

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Ryan in order to provide a completely secure technique for encrypting and decrypting of video type signals, which is fully compatible with all video tape formats and transmission systems (Ryan: column 7, lines 5-12).

17. In regards to claims 13-14, and 29-30, Tsukamoto does not disclose “changing the level of encryption,” “changing to a higher level of encryption,” or “changing the encryption on the frame boundaries.”

18. Ryan discloses a fixed scrambling algorithm can be used on each field of information for a low level of security. For a higher level the scrambling sequence can be changed as a function of time or a function of the number of fields or frames already encrypted (Ryan: column 7, lines 15-20). This meets the limitation of “changing the level of encryption,” and “changing to a higher level of encryption.” Ryan also discloses different encryption sequences can be used for odd frames and even frames and each sequence can be periodically changed for each frame (Ryan: column 7, lines 21-24). This meets the limitation of “changing the encryption on the frame boundaries.”

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encryption and decryption across a bus as disclosed by Tsukamoto with the method of changing levels of encryption on the frame boundaries as disclosed by Ryan in order to provide a completely secure technique for encrypting and decrypting of video type signals, which is fully compatible with all video tape formats and transmission systems (Ryan: column 7, lines 5-12).

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20. In regards to claim 20, the encrypted video signal is transmitted from the encipherer, propagates through the switch and I/O port to the data bus. The encrypted video signal is retrieved from the data bus and decrypted according to the received encryption key which only can be decrypted by a device with the correct encryption key (Tsukamoto: column 14, lines 33-43).

21. In regards to claim 21, Tsukamoto discloses that the decoder is adapted to decode digital video signals encoded in accordance with the MPEG Standard (Tsukamoto: column 4, lines 59-62).

22. In regards to claims 31, Tsukamoto discloses a digital graphics bus (Tsukamoto: column 1, lines 21-22).

23. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,699,426 to Tsukamoto et al in view of U.S. Patent No. 5,916,736 to Ryan. as applied to claims 1-6, 8-9, 11, 13-14, 20-21, and 29-31 above and further in view of U.S. Patent No 5,784,427 to Bennett et al.

However Tsukamoto does not disclose using programmable tap registers. Bennett discloses a linear feedback shift register for storing the value of the feedback and shift unit. A tap register stores a tap position indicator indicative of tap positions for the feedback and shift unit (Bennett: Abstract). Bennett discloses a tap register and combinatorial logic (Bennett: Figure 3). Bennett also discloses a memory device in figure 11. This meets the limitations of

“tap register, combinatorial logic, and tap memory; linear feedback shift registers.” An input sequence is injected into the shift register from an input register (Bennett: Figure 3; column 4, lines 5-7). This meets the limitation of “a combiner adapted to combine a seed signal together with feedback from said programmable tap register to create an input signal to said linear feedback shift register.” Bennett also discloses a majority mask register which identifies bits that must be logically combined (Bennett: column 5, lines 54-56). The corresponding bits of a shift register and a majority mask register are logically combined in an exclusive or logic block (Bennett: column 5, lines 66-67). This meets the limitation of “a high level of encryption.” The tap registers are programmable to allow the tap positions to be re-defined at any time (Bennett: column 5, lines 56-60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encrypting data across a bus as disclosed by Tsukamoto with the linear feedback shift registers and tap registers as disclosed Bennett in order to reduce to a minimum the number of processing steps required in a processor, to achieve a particular operating function, such as a linear feedback shift or a stepping function used by encryption algorithms (Bennett: Abstract).

24. Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,699,426 to Tsukamoto et al as applied to claims 1-6, and 8-9 above and further in view of U.S. Patent No 6,847,335 B1 to Chang et al.

25. Tsukamoto does not disclose TMDS. Chang discloses TMDS (Chang: column 4, lines 48-65).

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26. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encrypting data across a bus as disclosed by Tsukamoto with the method of using TMDS as disclosed Chang in order to be able to tolerate a relatively high amount of skew among the transmitted signals making such transmitters suitable for remote display devices such as flat panels and distant display set up connected via fiber optic cables (Chang: column 4, lines 52-57).

27. Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,699,426 to Tsukamoto et al in view of U.S. Patent No. 5,916,736 to Ryan. as applied to claims 1-6, 8-9, 11, 13-14, 20-21, and 29-31 above and further in view of U.S. Patent No. to et al.

28. Tsukamoto does not disclose TMDS. Chang discloses TMDS (Chang: column 4, lines 48-65).

29. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of encrypting data across a bus as disclosed by Tsukamoto with the method of using TMDS as disclosed Chang in order to be able to tolerate a relatively high amount of skew among the transmitted signals making such transmitters suitable for remote display devices such as flat panels and distant display set up connected via fiber optic cables (Chang: column 4, lines 52-57).

Conclusion

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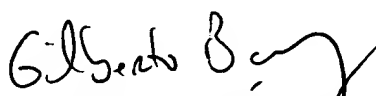
30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cas Stulberger whose telephone number is (571) 272-3810. The examiner can normally be reached on Monday - Friday, 9:00A.M. - 6:00P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CS

CS
July 20, 2005


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